

# **FLOODPLAIN REGULATIONS**

**Gallatin County, Montana**

**AMENDED DECEMBER 7, 1999**

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## **GALLATIN COUNTY FLOODPLAIN REGULATIONS**

### **INTENT**

This Ordinance is passed in order to comply with the Montana Floodplain and Floodway Management Act ( Chapter 5, Title 76-M.C.A.) and to ensure compliance with the requirements for the continued participation by Gallatin County, Montana in the National Flood Insurance Program. Land-use regulations which are hereby adopted are to be applied to all identified 100-year floodplains within Gallatin County, Montana.

### **STATUTORY AUTHORITY**

Municipalities have authority to adopt ordinances as provided for in 7-1-4123, MCA to promote the general public health and welfare.

Other authority for municipalities and counties to adopt floodplain management regulations appears in 76-5-101 through 406, MCA.

### **ADOPTION**

This Ordinance adopts the set of comprehensive land-use regulations for identified 100-year floodplains within Gallatin County, Montana. Identification of 100-year floodplains is based on the Gallatin County, Montana Flood Insurance Study, dated February 1, 1984, the City of Bozeman, Montana Flood Insurance Study, dated July 15, 1988, and the East Gallatin River and Upper Tributaries Flood Hazard Analysis Conservation Service, dated July, 1972. All Other (resolutions and/or ordinances) are hereby repealed as of the effective date of this Ordinance.

*(Amended County Resolution 1999-78 on December 7, 1999.)*

## CHAPTER 1

### TITLE AND PURPOSE

#### 1.01 Title

These Regulations shall be known and cited as Gallatin County Floodplain Regulations. These Regulations are in accordance with exercising the authority of the laws of the State of Montana.

#### 1.02 Purpose

To promote the public health, safety and general welfare, to minimize flood losses in areas subject to flood hazards and to promote wise use of the floodplain. These Regulations have been established with the following purposes intended:

- A. To guide development of the 100-year floodplain areas of Gallatin County outside incorporated areas consistent with the enumerated findings by:
  - 1. recognizing the right and need of water courses to periodically carry more than the normal flow of water;
  - 2. participating in coordinating efforts of federal, state and local management activities for 100-year floodplains; and,
  - 3. insuring the regulations and minimum standards adopted, insofar as possible, balance the greatest public good with the least private injury.
- B. Specifically it is the purpose of these Regulations to:
  - 1. restrict or prohibit uses which are dangerous to health, safety or property in times of flood, or cause increased flood heights or velocities;
  - 2. require that uses vulnerable to floods, including public facilities which serve such uses, be provided with flood protection at the time of initial construction;
  - 3. identify lands unsuitable for certain development purposes because of flood hazards;
  - 4. minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
  - 5. insure that potential buyers are notified that property is within a 100-year floodplain and subject to the provisions of these Regulations; and,
  - 6. insure that those who occupy 100-year floodplains assure responsibility for their actions.

## CHAPTER II

### DEFINITIONS

#### 2.01 Definitions

Unless specifically defined below, words or phrases used in these Regulations shall be interpreted so as to give them the meaning they have in common usage and to give these Regulations their most reasonable application.

Act - Montana Floodplain and Floodway Management Act, 76-5-101 through 406, MCA.

Alterations - Any change or addition to a structure that either increases its external dimensions or increases its potential flood hazard.

Appeal - A request for a review of the interpretation of the Floodplain Administrator of any provision of these Regulations or a request for a variance.

Area of Special Flood Hazard - The land in the floodplain within the community subject to inundation by a one percent (1%) or greater chance of flood in any given year, i.e. the 100-year floodplain.

Artificial Obstruction - Development - Any obstruction which is not natural and includes any dam, diversion, wall, riprap, embankment, levee, dike, pile, abutment, projection, revetment, excavation, channel rectification, bridge, conduit, culvert, building, refuse, automobile body, fill or other analogous structure or matter in, along, across or projecting into any 100-year flood plain which may impede, retard or alter the pattern of flow of water, either in itself or by catching or collecting debris carried by the water, or that is placed where the natural flow of water would carry the same downstream to the damage or detriment of either life or property.

Base Flood - A flood having a one percent (1%) chance of being equaled or exceeded in any given year. A base flood is the same as a 100-year flood.

Base Flood Elevation - The elevation above sea level of the base in relation to National Geodetic Vertical Datum of 1929 unless otherwise specified in the flood hazard study.

Channelization Project - The excavation and/or construction of an artificial channel for the purpose of diverting the entire flow of a stream from its established course.

Establish - To construct, place, insert or excavate.

Existing Manufactured Home Park or Subdivision - A manufactured home park or subdivision where the construction of facilities for servicing the manufactured homes lots is completed before the effective date of the floodplain management regulations. This includes, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

FEMA -- The Federal Emergency Management Agency

Flood or Flooding - A general and temporary condition of partial or complete inundation of normally dry lands from the overflow of a stream, or the unusual and rapid accumulation or runoff of surface waters from any source.

Floodplain - The areas subject to these regulations, generally adjoining a stream, which would be covered by floodwater of a base flood except for designated shallow flooding areas that receive less than one foot of water per occurrence. The floodplain consists of a floodway and floodway fringe.

Floodway - The channel of a stream and the adjacent overbank areas that must be reserved in order to discharge a base flood without cumulatively increasing the water surface elevation more than one-half (1/2) foot.

Floodway Fringe - That portion of the floodplain outside the limits of the floodway.

Levee -- A man-made embankment, usually earthen, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water to provide protection from temporary flooding.

Levee System -- A flood protection system that consists of a levee, or levees, and associated structures, such as drainage and closure devices, which are constructed and operated in accordance with sound engineering practices.

Flood Insurance Rate Map - The map on which the Federal Emergency Management Agency has delineated both the 100-year floodplains and the risk premium zones.

Flood Insurance Study - The report in which the Federal Emergency Management Agency has provided flood profiles, as well as the Flood Boundary and Floodway Map and the water surface profiles.

Lowest Floor (Elevation) - Any floor used for living purposes, storage or recreation. This includes any floor that could be converted to such a use.

Manufactured Home - A structure that is transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. This does not include "recreational vehicles."

Manufactured Home Park or Subdivision - A parcel or contiguous parcels of land divided into two or more manufactured home lots for rent or sale.

Mean Sea Level - The National Geodetic Vertical Datum (NGVD) of 1929 or other datum to which base flood elevations are referenced.

New Construction - Structures for which the start of construction, substantial improvement or alteration commences on or after the effective date of these Regulations.

Permit Issuing Authority - Gallatin County.

Recreational Vehicle Park or Campground - A parcel or contiguous parcels of land divided into two or more recreational vehicle spaces for rent or sale.

Riprap - Stone, rocks, concrete blocks or analogous material that is placed along the banks or bed of a stream for the purpose of alleviating erosion.

Start of Construction - Commencement of clearing, grading, filling, or excavating to prepare a site for construction.

Structure - A walled and roofed building, manufactured home, (or) a gas or liquid storage tank, bridge, culvert, dam, diversion, wall, revetment, dike, or other projection that may impede, retard, or alter the pattern of flow of water.

Substantial Damage -- Damage sustained by a structure where the cost of restoring the structure to its condition before damage would equal 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement - Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either:

- (1) before the improvement or repair is started, or
- (2) if the structure has been damaged, and is being restored, before the damage occurred.

For the purposes of this definition, substantial improvement is considered to occur when the first construction to any wall, ceiling, floor or other structural part of the building commences. A substantial improvement differs from the alteration of a structure in that it is not defined to including decreasing or affecting the external dimensions of the structure. Their term also does not include either:

- (1) any project for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions,
- (2) any alteration of a structure listed on the National Register of Historic Places or State Inventory of Historic Places.

Suitable Fill - Fill material which is stable, compacted, well graded, pervious, generally unaffected by water and frost, devoid of trash or similar foreign matter, and tree stumps or other organic material; and is fitted for the purpose of supporting the intended use and/or permanent structure.

Variance - A grant or relief from the requirements of these regulations which would permit construction in a manner that would otherwise be prohibited by these Regulations.

Violation - The failure of a structure or other development to be fully compliant with these regulations. A structure or other development without elevation certificate, certification by a



licensed engineer or architect of compliance with these regulations, or other evidence of compliance is presumed to be in violation until such time as documentation is provided.

100 - Year Flood - A flood having a one percent (1 %) chance of being equaled or exceeded in any given year. A 100-year flood has nearly a 23 percent chance of occurring in a 25-year period. A 100-year flood is the same as a base flood.

## CHAPTER III

### GENERAL PROVISIONS

#### 3.01 Jurisdictional Area

These Regulations shall apply to all lands within the jurisdiction of Gallatin County outside of incorporated areas, State of Montana, shown on the Official Floodplain Maps as being located within a 100-year floodplain district.

#### 3.02 Floodplain District Establishment

The floodplain districts established are defined by the 100-year floodplains as delineated in the Gallatin County Flood Insurance Study. The basis for the Flood Insurance Study is a scientific and engineering report entitled, "The Flood Insurance Study for Gallatin County, Montana", dated February 1, 1984, with accompanying Flood Insurance Rate Maps and Flood Boundary and Floodway Maps, and the East Gallatin River and Upper Tributaries Flood Hazard Analysis prepared by the United State Department of Agriculture Soil Conservation Service dated June, 1972. The Official Floodplain Maps, together with the Flood Insurance Report are on file in the office of the Gallatin County Floodplain Administrator.

#### 3.03 Floodplain Administrator

The Gallatin County Commission designates the Gallatin County Planning Director as the Gallatin County Floodplain Administrator. The responsibilities of this position are outlined in Chapter IV of these Regulations.

*(Amended County Resolution 1999-78 on December 7, 1999.)*

#### 3.04 Rules for Interpretation of Floodplain District Boundaries

The boundaries of the 100-year floodplain and floodway shall be determined by scaling distances on the official floodplain maps, and using the floodway data table contained in the flood insurance study report. The maps may be used as a guide for determining the 100-year floodplain boundary, but the exact location of the floodplain boundary shall be determined where the base flood elevation intersects the natural ground. For unnumbered A Zones and AO Zone floodplains, where there is a conflict between a mapped floodplain boundary and actual field conditions, the Floodplain Administrator may interpret the location of the 100-year floodplain boundary based on field conditions or available historical flood information.

#### 3.05 Compliance

No structure or land use shall be located, extended, converted or structurally altered without full compliance with the provisions of these Regulations and other applicable regulations. These Regulations meet the minimum floodplain development requirements as set forth by the Montana Board of Natural Resources and Conservation and in the National Flood Insurance Program Regulation.

### 3.06 Abrogation and Greater Responsibility

It is not intended by these Regulations to repeal, abrogate or impair any existing easements, covenants, deed restrictions or underlying zoning. However, where these Regulations impose greater restrictions, the provisions of these Regulations shall prevail.

### 3.07 Regulation Interpretation

In their interpretation and application, the provisions of these Regulations shall be held to be minimum requirements and shall be liberally construed in favor of the governing body and shall not be deemed a limitation or repeal or any other powers granted by State statute.

### 3.08 Warning and Disclaimer of Liability

These Regulations do not imply that areas outside the delineated floodplain boundaries or permitted land uses within such areas will always be totally free from flooding or flood damages. These regulations shall not create a liability on the part of, or a cause of action against Gallatin County, or any officer or employee thereof for any flood damages that may result from reliance upon these Regulations.

### 3.09 Severability

If any section, clause, provision or portion of these Regulations is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of these Regulations shall not be affected thereby.

### 3.10 Disclosure Provision

All owners of property in an identified 100-year floodplain as indicated on the Official Floodplain Maps must notify potential buyers or their agents that such property is subject to the provisions of these Regulations.

## CHAPTER IV

### ADMINISTRATION

#### 4.01 Administration

- A. As provided in Section 3.03 of these Regulations, the Gallatin County Floodplain Administrator has been designated by the Gallatin County Commission, and has the responsibility of such position as outlined in these Regulations.
- B. The Floodplain Administrator is hereby appointed with the authority to review floodplain development permit applications and proposed uses or construction to determine compliance with these Regulations, and is required to assure all necessary permits have been received from these governmental agencies from which approval is required by federal and state laws and local codes, including Section 404 of the Federal Water Pollution Control Act of 1972, 33 U.S.C. 1334, and under the provisions of the Natural Streambed and Land Preservation Act.
  - 1. Additional Factors - Floodplain development permits shall be granted or denied by the Floodplain Administrator on the basis of whether the proposed establishment, alteration, or substantial improvement of an artificial obstruction or non-conforming use meets the requirements of these Regulations. Additional factors that shall be considered for every permit application are:
    - a. the danger to life and property due to increased flood heights, increased flood water velocities or alterations in the pattern of flood flow caused by encroachments;
    - b. the danger that materials may be swept onto other lands or downstream to the injury of others;
    - c. the proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination and unsanitary conditions;
    - d. the susceptibility of the proposed facility and its contents to flood damage and the effects of such damage on the individual owner;
    - e. the importance of the services provided by the facility to the community;
    - f. the requirement of the facility for a water-front location;
    - g. the availability of alternative locations not subject to flooding for the proposed use;
    - h. the compatibility of the proposed use with existing development and anticipated development in the foreseeable future;
    - i. the relationship of the proposed use to the comprehensive plan and floodplain

- management for the area;
  - j. the safety of access to property in times of flooding for ordinary and emergency services; and,
  - k. such other factors as are in harmony with the purposes of these Regulations, the Montana Floodplain and Floodway Management Act and the National Flood Insurance Program.
- C. A floodplain development permit application is considered to have been automatically granted sixty (60) days after the date of receipt of the application by the Floodplain Administrator, unless the applicant has been notified that the permit is denied, conditionally approved or additional information pertinent to the permit review process is required.
- D. The Floodplain Administrator shall adopt such administrative procedures as may be necessary to efficiently administer the provision of these Regulations.
- E. The Floodplain Administrator shall maintain such files and records as may be necessary to document nonconforming uses, base flood elevations, floodproofing and elevation certifications, fee receipts, the issuance of permits, agendas, minutes, records of public meetings, and any other matters relating to floodplain management in Gallatin County. Such files and records shall be open for public inspection. In matters of litigation, the Gallatin County attorney may restrict access to specific records.
- F. Copies of all permits granted must be sent to the Department of Natural Resources and Conservation in Helena, Montana.
- G. The floodplain administrator may require whatever additional information is necessary to determine whether the proposed activity meets the requirements of these regulations. Additional information may include hydraulic calculations assessing the impact on base flood elevations or velocities; level survey; or certification by a registered land surveyor, professional engineer, or licensed architect that the requirements of these regulations are satisfied.
- H. Upon receipt of an application for a permit or a variance the Floodplain Administrator shall prepare a notice containing the facts pertinent to the application and shall publish the notice at least once in a newspaper of general circulation in the area. Notice shall also be served by first-class mail upon adjacent property owners and the DNRC Floodplain Management Section. The notice shall provide a reasonable period of time, not less than 15 days, for interested parties to submit comments on the proposed activity.
- I. In riverine situations, notification by the Floodplain Administrator must be made to adjacent communities, the Floodplain Management Section (DNRC), and the Federal Emergency Management Agency, prior to any alteration or relocation of a stream. The flood-carrying capacity within the altered or relocated portion of any stream must be maintained. Erosion control measures shall be incorporated to ensure stability of altered channels and stream bans.

#### 4.02 Permit Applications

- A. Activities or uses which require the issuance of a permit, including the expansion or alteration of such uses, shall not be initiated, established or undertaken until a permit has been issued by the Floodplain Administrator.
- B. Permit applicants may be required to furnish such of the following as is deemed necessary by the Floodplain Administrator for determining the suitability of the particular site for the proposed use:
  - 1. Plans in duplicate drawn to scale with dimensions shown, showing the nature, location and elevation of the lot, existing and proposed structure locations, fill, storage or materials sites, flood-proofing measures, first floor of proposed structures in mean sea level elevation and location of the channel;
  - 2. A plan view of the proposed development indicating external dimensions of structures, street or road, finished grade elevations, well locations, individual sewage treatment and disposal sites, excavation and/or fill quantity estimates, site plan and/or construction plans; and,
  - 3. Specifications for flood-proofing, filling, excavating, grading, riprapping, storage of materials and utilities location.
  - 4. In evaluating a proposed use within a floodplain for which no floodway has been designated, the Floodplain Administrator may require the applicant to submit the following:
    - a. Cross Sections A minimum of four (4) surveyed valley cross sections by a registered land surveyor according to the following field survey instructions:
      - 1. The surveys required are cross sections of stream channels and the floodplain on both banks.
      - 2. One cross section shall be taken at a point on the stream from which it could be extended through the site.
      - 3. Three cross sections shall be taken downstream from the site, each approximately one thousand (1,000) feet apart. In no case, however, should the fall in water surface elevation between two (2) sections exceed five (5.0) feet. Cross sections should also be taken at all bridge locations in the reach. The cross section farthest downstream should be located at a natural constriction or at a bridge crossing. Cross sections shall be taken at any bridge location between site and lowest cross section. All bridges in the reach should be described and sketched showing unobstructed waterway openings and elevations.
      - 4. Distances between cross sections are to be determined by stadia, and these distances and locations of cross sections shall be shown on the

location map.

5. The overbank cross sections are to be extended to obtain a vertical rise of fifteen (15) feet above the water surface.
  6. If a U.S. Geological Survey river gauging station is within the reach of the stream under study, the elevation of any convenient foot mark shall be surveyed and clearly indicated on the location map.
  7. Elevations of the water surface determined by survey as part of each valley cross section.
  8. Cross sections should be plotted on ten (10) divisions to the inch cross section paper, using any convenient, identified scale for vertical and horizontal distance.
    - a. The elevation of any known high water mark shall be identified and included in the survey.
    - b. Profile A profile sheet shall be prepared by a registered land surveyor, or registered civil engineer on cross section paper of ten (10) divisions to the inch, showing the observed water surface profile, location of cross sections, site boundaries, riverbank profile, and thalweg (lowest point of the channel bottom along the reach of stream).
    - c. Reference All surveyed elevations shall be tied to mean sea level datum and the benchmark used shall be identified.
5. Instructions for field surveys for flood hazard elevations are available in the Flood Administrator's Office.
  6. A professional engineer's or registered architect's design calculations and certification that the proposed activity has been designated to be in compliance with these regulations.
  7. Certification of flood-proofing and/or elevation shall be provided on a standard form available from the floodplain administrator.
- C. To determine that the permit specifications and conditions have been completed, applicants who have received permits are required to furnish the following, at the time of an on-site conformance inspection, for determining that the permit specifications and conditions have been complied with:
1. Certification by a registered professional engineer or licensed land surveyor of the actual mean sea level elevation of the lowest floor (including basement ) of all new, altered or substantially improved structures.
  2. If flood-proofing techniques were utilized for the above described structures, then the

mean sea level elevation to which the flood proofing was accomplished must be similarly certified.

3. Certification shall also be required, for artificial obstructions other than buildings, that the activity was accomplished in accordance with these regulations and the design plans submitted with the application for the permit activity. This certification may be waived by the floodplain administrator if it can be clearly ascertained by a site inspection that the activity was accomplished in accordance with these regulations.
4. Certification of flood-proofing and/or elevation shall be provided on a standard form available from the floodplain administrator.

#### 4.03 Emergency Waiver

- A. Emergency repair to and/or replacement of severely damaged public transportation facilities, public water and sewer facilities, and flood control works may be authorized and floodplain development permit requirements waived if:
  1. upon notification and prior to the emergency repair and/or replacement, the Floodplain Administrator determines that an emergency condition warranting immediate action exists; and
  2. the Floodplain Administrator agrees upon the nature and type of proposed emergency repair and/or replacement.
- B. Authorization to undertake emergency repair and/or replacement work may be given verbally if the Floodplain Administrator feels that such a written authorization would unduly delay the emergency works. Such verbal authorization must be followed by a written authorization stating the emergency condition, the type of emergency work agreed upon, and a notation that a verbal authorization had been previously given.

#### 4.04 Review -Variances-Appeals

- A. Gallatin County Commission may, by variance, grant a permit that is not in compliance with the minimum standards contained in these Regulations according to the following procedures.
- B. All applications for a variance shall be accompanied by a fee of \$225.00, separate from the permit application fee. The application must clearly state all issues concerning the variance and any not included shall be considered separately and must be accompanied by another application fee.
  1. Variances shall not be issued for areas within a floodway if any additional increase in flood elevations or velocities after allowable encroachments into the floodway fringe would result;
  2. Variances shall only be issued upon:



- a. a showing of good and sufficient cause;
  - b. a determination that refusal of a permit would, because of exceptional circumstances, cause a unique or undue hardship on the applicant or community involved;
  - c. a determination that the granting of a variance will not increase flood hazard either upstream or downstream in the area of insurable building, present additional threats to public safety, be an extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing state or local laws;
  - d. a determination that a proposed use would be adequately flood-proofed;
  - e. a determination that a reasonable alternative location outside the floodplain is not available;
  - f. a determination that the variance requested is the minimum necessary, considering the flood hazard, to afford relief; and
  - g. approval of the Montana Department of Natural Resources and Conservation, upon request from Gallatin County prior to formally approving any permit application which is in variation to these Regulations.
3. Variances shall be issued in writing from the Gallatin County Commission and shall notify the applicant that:
- a. a specific variance is granted, and that certain conditions may be attached,
  - b. the issuance of a variance to construct a structure below the 100-year floodplain elevation will result in increased premium rates and
  - c. such construction below the 100-year flood elevation increases risks to life and property. The Floodplain Administrator shall maintain the records of variance notification, variance actions, including justification for their issuance, and forward copies of all variance actions to the Montana Department of Natural Resources and Conservation and the Federal Emergency Management Agency.
- C. Appeals of any decision made by the Floodplain Administrator may be appealed to the Gallatin County Commission. All appeals of the decisions made by the Floodplain Administrator shall be deemed as an application for a variance and shall be accompanied by the appropriate fee. On hearing of any appeal, the Gallatin County shall take testimony and enter finding of facts and conclusions and shall make such findings and conclusions available to the appellant within a reasonable time.

#### 4.05 Fees

- A. A processing fee of \$225.00 shall be submitted with each application to help offset the expenses incurred by the hearing procedure. This fee is not refundable once public notice has been given.
- B. A fee of \$225.00 shall be submitted with each application for a variance to help offset the expenses incurred by the hearing procedure. This fee is not refundable once public notice has been given.

#### 4.06 Violation Notice

The Floodplain Administrator shall bring any violation of these Regulations to the attention of the Gallatin County Commission, the Office of the Gallatin County Attorney and the Montana Department of Natural Resources and Conservation.

#### 4.07 Compliance

Any use, arrangement or construction not in compliance with that authorized shall be deemed a violation of these Regulations and punishable as provided in Section 4.08. An applicant may be required to submit certification by a registered professional engineer, architect, land surveyor or other qualified person designated by the Floodplain Administrator that finished fill and building floor elevations, flood proofing or other flood protection measures were accomplished in compliance with Regulations.

#### 4.08 Penalties

Violation of the provisions of this Resolution or failure to comply with any of the requirements shall constitute a misdemeanor. Any person who violates this Ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$500.00 or imprisoned for not more than six (6) months or both. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the County of Gallatin from taking such other lawful action as is necessary to prevent or remedy any violation.

#### 4.09 Emergency Preparedness Planning

In formulating community development goals, the community shall consider the development of a plan for evacuating residents of all manufactured home parks or subdivisions located within flood prone areas. This plan should be developed, filed with, and approved by appropriate community emergency management authorities.

#### 4.10 Amendments

These regulations may be amended by the County Commission whenever the public necessity and convenience and general welfare require such amendment, after a public hearing is held before the County Commission, legal notice of which shall have been given in a newspaper of general circulation in the county not less than fifteen (15) days nor more than thirty (30) days prior to the date of the hearing.

## CHAPTER V

### SPECIFIC STANDARDS

#### 5.01 Application

The minimum floodplain development standards listed in this chapter apply to the floodway/floodway fringe portions of the 100-year floodplain as delineated on the Gallatin County Floodway and Flood Boundary Maps, the Flood Insurance Rate Map Community Panel Numbers (300028 0001-0021) for areas outside the corporate limits of the City of Bozeman and also correspond to the numbered A zones depicted on the Gallatin County Flood Insurance Rate Maps, and those areas of the East Gallatin River and Upper Tributaries Flood Hazard Analyses prepared by the United States Department of Agriculture Soil Conservation Service, dated July, 1972.

*(Amended County Resolution 1999-78 on December 7, 1999.)*

#### 5.02 Floodway

A. Uses Allowed Without Permits The following open space uses shall be allowed without a permit anywhere within the floodway, provided that such uses conform to the provisions of Chapter VII of these Regulations, are not prohibited by any other ordinance, resolution or statute and do not require fill, excavation, permanent storage of materials or equipment or structures other than portable structures:

1. Agricultural uses;
2. Accessory uses such as loading or parking areas, or emergency landing strips associate with industrial-commercial facilities;
3. Private and public recreational uses such as golf courses, driving ranges, archery ranges, picnic grounds, boat-launching ramps, parks, wildlife management and natural areas, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, and hiking or horseback riding trails;
4. Forestry, including processing of forest projects with portable equipment;
5. Residential uses such as lawns, gardens, parking areas and play areas;
6. Irrigation and livestock supply wells, provided that they are located at least five hundred (500) feet from domestic water supply wells; (and)
7. Fences, except permanent fences crossing channels.
8. Storage of recreational vehicles provided that they be on the site for fewer than 180 consecutive days, or be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system with wheels intact, is attached to the site only by quick disconnect type utilities and security

devices, and has no permanently attached additions.

B. Uses Requiring Permits The following artificial obstructions and non-conforming uses may be permitted in the floodway subject to the issuance of a permit by the Floodplain Administrator:

1. Excavation of material from the pits and pools provided that:
  - a. a buffer strip of undisturbed land of sufficient width to prevent flood flows from channeling into the excavation is left between the edge of the channel and edge of the excavation;
  - b. the excavation meets all applicable laws and regulations of other local and state agencies; and
  - c. excavated material is stockpiled outside the floodway.
2. Railroad, highway and street stream crossings provided the crossings are designed to offer minimal obstruction to flood flow. Stream crossings shall not increase the elevation of the 100-year flood more than one-half foot nor cause a significant increase in flood velocities.
3. Limited filling for highway, street and railroad embankments not associated with stream crossings, provided that:
  - a. reasonable alternative transportation routes outside the designated floodway are not available; and
  - b. such floodway encroachment is located as far from the stream channel as possible and shall not result in a cumulative increase in base flood elevations, after allowable encroachments into the floodway fringe, exceeding one-half foot.
4. Buried or suspended utility transmission lines, provided that:
  - a. suspended utility transmission lines are designed such that the lowest point of the suspended line is at least six (6) feet higher than the base flood elevation;
  - b. towers and other appurtenant structures are designed and placed to withstand and offer minimal obstruction to flood flows; and
  - c. utility transmission lines carrying toxic or flammable materials are buried to a depth at least twice the calculated maximum depth of scour for a flood of 100-year frequency. The maximum depth of scour may be determined from any of the accepted hydraulic engineering methods, but the final calculated figure shall be subject to approval by the Floodplain Administrator.
5. Storage of materials and equipment, provided that:
  - a. the material or equipment is not subject to major damage by flooding and is

- b. properly anchored to prevent flotation or downstream movement; or, the material or equipment is readily removable within the limited time available after flood warning. Storage of flammable, toxic or explosive materials shall not be permitted.
- 6. Domestic water supply wells, provided that:
  - a. they are driven or drilled wells located on ground higher than the surrounding ground to assure positive drainage from the well;
  - b. well casings are water tight to a distance of at least twenty five (25) feet below the ground surface;
  - c. water supply and electrical lines have a watertight seal where the lines enter the casing;
  - d. all pumps, electrical lines and equipment are either of the submersible type or are adequately flood-proofed; and
  - e. check valves are installed on main water lines at wells and all building entry locations.
- 7. Buried and sealed vaults for sewage disposal in recreational areas, provided that they meet applicable laws and standards administered by the Montana Department of Health and Environmental Sciences.
- 8. Public or private campgrounds, and recreational vehicle parks or campgrounds provided that:
  - a. access roads require only limited fill and do not obstruct or divert flood waters; and
  - b. Recreational vehicles and travel trailers are not in place more than 180 consecutive days and are licensed and ready for highway use. They are ready for highway use if on wheels or jacking system with wheels intact, are attached to the site with only quick disconnect type utilities and securing devices, and have no permanently attached additions.
- 9. Structures accessory to the uses permitted in this Section such as boat docks, marinas, sheds, picnic shelters, tables and toilets, provided that:
  - a. the structures are not intended for human habitation;
  - b. the structures will have a low flood damage potential;
  - c. the structures will, insofar as possible, be located on ground higher than the surrounding ground and as far from the channel as possible;

- d. the flood-proofing standards of Chapter VII are met; and,
  - e. the structures will be constructed and placed so as to offer a minimal obstruction to flood flows and are anchored to prevent flotation.
- 10. Substantial improvements to any structure provided that the provisions of Section 5.03-B.3. and Section 5.03-B.4. or 5.03-B.5 of these regulations are met. In the floodway the structure must be flood-proofed or elevated on a permanent foundation rather than on fill.
  - 11. All other artificial obstructions, substantial improvements or non-conforming uses not specifically listed in, or prohibited by, these Regulations.
- C. Permits for Flood Control Works Flood control works shall be allowed within floodways subject to the issuance of a permit by the Floodplain Administrator with the following conditions:
- 1. Levees and floodwalls are permitted if:
    - a. the proposed levee or floodwall is designed and constructed to safely convey a flood of 100-year frequency; and,
    - b. the cumulative effect of the levee or floodwall combined with allowable floodway fringe encroachments does not increase the unobstructed elevation of the flood of 100-year frequency. The Floodplain Administrator may establish either a lower or higher permissible increase in the elevation of the flood of 100-year frequency for individual levee projects, with concurrence of the Montana Department of Natural Resources and Conservation and the Federal Emergency Management Agency based upon the following criteria:
      - 1. the estimated cumulative effect of other reasonable anticipated future permissible uses; and,
      - 2. the type and amount of existing flood-prone development in the affected area.
    - c. the proposed levee or floodwall, except those to protect agricultural land only, are constructed at least three (3) feet higher than the base flood.
  - 2. Riprap, except that which is hand-placed, if:
    - a. the riprap is designed to withstand a flood of 100-year frequency;
    - b. the riprap does not increase the elevation of the flood of 100-year frequency; and,
    - c. the riprap will not increase erosion upstream, downstream, or adjacent to the riprap site.

3. Channelization projects if they do not significantly increase the magnitude, velocity or elevation of the flood of 100-year frequency in the proximity of the project.
  4. Dams, provided that:
    - a. they are designed and constructed in accordance with the Montana Dam Safety Act approved safety standards; and,
    - b. they will not increase flood hazards downstream, either through operational procedures or improper hydrologic design.
- D. Permits for Water Diversions: Permits for the establishment of a water diversion or change in place of diversion shall not be issued if, in the judgement of the Floodplain Administrator:
1. the proposed diversion will increase the upstream base flood elevation to the detriment of neighboring property;
  2. the proposed diversion is not designed and constructed to minimize potential erosion from a flood of 100-year frequency; and,
  3. any permanent diversion structure crossing the full width of the stream channel is not designed and constructed to safely withstand up to a flood of 100-year frequency.
- E. Prohibited Uses: The following artificial obstructions and non-conforming uses are prohibited within the floodway:
1. New construction and alterations of any, residential, commercial, or industrial structure;
  2. Encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway that would result in erosion of embankment, obstruction of the natural flow of waters, or increase in flood levels within the community during the occurrence of the flood of 100-year frequency.
  3. The construction of permanent storage of an object subject to flotation or movement during flood level periods;
  4. Solid and hazardous waste disposal, water distribution systems, and sewage treatment and/or disposal systems, except as allowed or approved under the laws and standards administered by the Montana Department of Health and Environmental Sciences; and,
  5. Storage of highly toxic, flammable or explosive materials.
  6. Alterations of structures unless it can be shown the alteration won't raise flood heights;
  7. Manufactured homes.

### 5.03 Floodway Fringe

- A. Uses Allowed Without Permits. All uses allowed in the floodway, according to the provisions of Section 5.02 A of these Regulations, shall also be allowed without a permit in the floodway fringe. In addition, individual or multiple family subsurface sewage disposal systems are allowed only when they are reviewed and approved under laws and regulations administered by the Department of Health and Environmental Sciences or the local health board.
- B. Uses Requiring Permits. All uses allowed in the floodway subject to the issuance of a permit, according to the provisions of Section 5.02 B (and Section 5.02 C) of these Regulations, shall also be allowed by permit within the floodway fringe. In addition, new construction, substantial improvements and alterations to structures, including but not limited to residential, commercial and industrial construction and suitable fill shall be allowed by permit from the Floodplain Administrator subject to the following conditions:
1. Such structures or fill must not be prohibited by any other statute, regulation, ordinance or resolution;
  2. Such structures or fill must be compatible with local comprehensive plans;
  3. The new construction, alterations and substantial improvements of residential structures including manufactured homes must be constructed on suitable fill such that bottom floor elevations are two (2) feet or more above the base flood elevation of the. The suitable fill shall be at an elevation no lower than the and shall extend for at least fifteen (15) feet, at that elevation, beyond the structures in all directions;
  4. The new construction, alteration and substantial improvement of commercial and industrial structures must be either constructed on suitable fill, as specified in Section 5.03-B.3 of these Regulations, or be adequately flood-proofed to an elevation no lower than two (2) feet above the elevation of the base flood elevation of the flood of 100-year frequency. Flood-proofing shall be accomplished in accordance with Chapter VII of these Regulations and shall further include impermeable membranes or materials for floor and walls, water-tight enclosures for all window, doors, and other openings, and be certified by a registered professional engineer or architect that the flood-proofing methods are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces associated with the flood of 100-year frequency;
    - a. If the structure is designed to allow internal flooding of areas below the lowest floor, use of this space shall be limited to parking, loading areas, building access, and storage of equipment or materials not appreciably affected by flood waters. The floors and walls shall be designed and constructed of materials resistant to flooding to an elevation no lower than two feet above the base flood elevation. Walls shall be designed automatically equalize hydrostatic forces by allowing for entry and exit of floodwaters. Openings may be equipped with screens, louvers, valves, other coverings, or devices which permit the automatic entry and exit of



floodwaters.

- b. Structures whose lowest floors are used for a purpose other than parking, loading, or storage of materials resistant to flooding shall be flood-proofed to an elevation no lower than two feet above the base flood elevation. Flood-proofing shall include impermeable membranes or materials for floors and walls and watertight enclosures for all windows, doors, and other openings. These structures shall also be designed to withstand the hydrostatic, hydrodynamic, and buoyancy effects of a 100-year flood.
  - c. Flood-proofing of electrical, heating, and plumbing systems shall be accomplished in accordance with Chapter VII of these regulations.
5. A development proposed for 100-year floodplain, where water surface elevations are available but no floodway is delineated, may not significantly increase flood velocities or depths or generally alter patterns of flood flow. The Floodplain Administrator may require a permit applicant to furnish additional hydraulic data before acting on a permit application for such a floodplain. The data may include, but are not limited to, any of the following:
- a. a hydraulic study documenting probable effect on upstream or downstream property owners caused by the proposed development; or,
  - b. the calculated increase in the 100-year frequency water surface profile caused by the proposed development.

Permits for such proposed development may be modified or denied if the additional information shows that the proposed use would cause an additional flood hazard to adjacent property or significantly increase flood heights. A significant increase in flood heights is to be one-half (1/2) foot unless existing or anticipated development in the area dictates a lesser value of allowable increase.

Also, 100-year water surface profile data shall be provided for subdivision proposals and other proposed developments that contain at least fifty (50) lots or five (5) acres (whichever is less);

6. All manufactured homes placed in the floodway fringe must have the chassis securely anchored to a foundation system that will resist floatation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, over-the-top or from ties to ground anchors. The following conditions also apply;
- a. When a manufactured home is 1) altered, 2) replaced because of substantial damage as a result of a flood, or 3) replaced on an individual site, the lowest floor must be elevated two feet above the base flood elevation. The home can be elevated on fill or raised on a permanent foundation of reinforced concrete, reinforced mortared block, reinforced piers, or other foundation elements of at least equivalent strength.
  - b. Replacement or substantial improvements of manufactured homes in an existing manufactured home park or subdivision must be raised on a

permanent foundation. The lowest floor must be two feet above the base flood elevation. The foundation must consist of reinforced concrete, reinforced mortared block, reinforced piers, or other foundation elements of at least equivalent strength.

- c. Manufactured homes proposed for use as commercial or industrial structures must be elevated and anchored, rather than flood-proofed;
  - 7. Fill material placed in the floodway fringe must be stable, compacted, well graded, pervious, generally unaffected by water and frost, devoid of trash or similar foreign matter, devoid of tree stumps or other organic material, and appropriate for the purpose of supporting the intended use and/or permanent structure.
  - 8. Roads, streets, highways, and rail lines shall be designed to minimize increase in flood heights. Where failure or interruption of transportation facilities would result in danger to the public health or safety, the facility shall be located two (2) feet above the base flood elevation;
  - 9. Agricultural structures that have a low damage potential, such as sheds, barns, shelters, and hay or grain storage structures must be adequately anchored to prevent flotation or collapse; and all electrical facilities shall be placed above the base flood elevation; and
  - 10. Recreational vehicles, if they are on the site for more than 180 consecutive days are not ready for highway use, must meet the elevating requirements of Section 5.03-B.3.
- C. Prohibited Uses The following artificial obstructions and non-conforming uses are prohibited within the floodway fringe:
- 1. Solid and hazardous waste disposal; and
  - 2. Storage of highly toxic, flammable, or explosive materials. Storage of petroleum products may be allowed by permit if stored on compacted fill at least two feet above the base flood elevation and anchored to a permanent foundation to prevent downstream movement.

#### 5.04 Floodplain Areas with Flood Elevations and No Delineated Floodway

- A. A development proposed for a 100-year floodplain, where water surface elevations are available but no floodway is delineated, may not significantly increase flood velocities of depths or generally alter patterns of flood flow. The provisions of Section 5.03, Floodway Fringe, shall apply to these areas. The Floodplain Administrator may require a permit applicant to furnish additional hydraulic data before acting on a permit application for such a floodplain. The data may include, but are not limited to, any of the following:
  - 1. a hydraulic study documenting probable effect on upstream, downstream, or adjacent property owners caused by the proposed development; or

2. the calculated increase in the 100-year flood water surface profile caused by the proposed development.
- B. Permits for such proposed development may be modified or denied if the additional information shows that the proposed use would cause an additional flood hazard to adjacent property or significantly increase flood heights. A significant increase in flood heights is one-half foot unless existing or anticipated development in the area dictates a lesser amount of allowable increase.

#### 5.05 Shallow Flooding (AO Zones)

- A. Shallow flooding areas are delineated as A O Zone floodplains on the Gallatin County Flood Insurance Rate Maps. The provisions of Section 5.03, (Floodway Fringe) of these Regulations shall apply to A O Zone floodplains, (including Section 5.03-B.5. of these Regulations.) The flooding depth of 100-year frequency is indicated as the depth number on the Flood Insurance Rate Maps and shall be referenced to the crown of the nearest street or stream flow line in determining fill and/or flood-proofing heights which are to be utilized in applying the provisions of Section 5.03-B.3. and Section 5.03-B.4. of these regulations. In the absence of depth or elevation information, a minimum 2 foot flood depth shall be used.
1. Floodplain Boundary Interpretation. The Floodplain Administrator shall make interpretations where needed, as to the exact location of an A O Zone floodplain boundary when there appears to be a conflict between a mapped boundary and actual field conditions.

## CHAPTER VI

### GENERAL STANDARDS

#### 6.01 Applications

The minimum floodplain development standards listed in this chapter apply to the 100-year floodplains delineated by approximated methods and identified as unnumbered A Zones on The Gallatin County Flood Insurance Rate Maps.

- A. Uses Allowed Without Permits. All uses allowed in a floodway, according to the provisions of Section 5.02-A of these Regulations shall also be allowed without a permit in unnumbered A-Zone floodplains.
- B. Uses Requiring Permit. All uses allowed in the floodway fringe subject to the issuance of a permit, according to the provisions of Section 5.03-B, shall require permits from the Floodplain Administrator for unnumbered Zone A floodplain. Also, the provisions of Section 5.03-B.5. apply to the Zone A floodplain with no floodway delineated or water surface profile computed. Since there are no 100-year frequency surface profiles computed for Zone A floodplain, the following conditions also shall apply:
1. Elevation data on the 100-year frequency flood shall be provided for subdivision proposals and other proposed developments which contain at least fifty (50) lots or five (5) acres (whichever is less ) and used in applying Sections 5.03-B.3., and 5.03-B.4 of these Regulations;
  2. The floodplain Administrator may obtain, review, and reasonably use any base flood elevation and floodway data available from a Federal, State, or other source, until such data has been provided by the Federal Emergency Management Agency to enforce Section 5.03-B.3 and 5.03-B.4 of these Regulations and,
  3. Historical flood elevations may be used by the Floodplain Administrator in determining suitable fill or flood-proofing elevations to be achieved, and used in accordance with Section 5.03-B.3 and Section 5.03-B.4 of these Regulations;
  4. If historical flood evidence is not available, then the Floodplain Administrator shall determine, from a field review at the proposed development site, an appropriate fill and/or flood-proofing elevation to be utilized in applying Sections 5.03-B.3 and 5.03-B.4 of these regulations. In the absence of depth or elevation, a minimum two-foot flood depth shall be used; and
  5. Proposed structures must be anchored to prevent flotation or collapse and must be located as far from stream channels as practicable.
- C. Prohibited Uses. Those uses prohibited in the Floodway Fringe, in accordance with Section 5.03-C. of these Regulations, shall also be prohibited within the Zone A floodplain boundaries.
- D. Floodplain Boundary Interpretation. The Floodplain Administrator shall make interpretations where needed, as to the exact location of the Zone A floodplain boundary when there appears to be a conflict between a mapped boundary and actual field conditions.

## CHAPTER VII

### FLOOD-PROOFING REQUIREMENTS

#### 7.01 Certification

If the following flood-proofing requirements are to be applied to a proposed structure, as stipulated by the Floodplain Administrator in accordance with these Regulations, the methods used must be certified as adequate by a registered professional engineer or architect.

#### 7.02 Conformance

Permitted flood-proof systems shall conform to the conditions listed below: and the flood-proofing standards listed in Section 5.03-B.4. of these regulations for commercial and industrial structures.

##### A. Electrical Systems

1. All incoming power service equipment, including all metering equipment, control centers, transformers, distribution and lighting panels and all other stationary equipment must be located at least two (2) feet above the base flood elevation;
2. Portable or movable electrical equipment may be placed below the base flood elevation, if the equipment can be disconnected by a single plug-and-socket assembly of the submersible type;
3. The main power service line shall have automatically operated electrical disconnect equipment or manually operated electrical disconnect equipment located at an accessible remote location outside the floodplain of 100-year frequency and above the base flood elevation; and
4. All electrical wiring systems installed at or below the elevation of the flood of 100-year flood shall be suitable for continuous submergence and may not contain fibrous components.

##### B. Heating Systems

1. Float operated automatic control valves must be installed in supply lines to gas furnaces so that the fuel supply is automatically shut off when flood waters reach the floor level where the furnaces are located;
2. Manually operated gate valves that can be operated from a location above the elevation of the flood of 100-year flood also shall be provided in gas supply lines;
3. Electric heating systems must be installed in accordance with the provisions of Section 7.02 A.

C. Plumbing Systems

1. Sewer lines, except those to be buried and sealed in vaults, must have check valves installed to prevent sewage backup into permitted structures;
2. All toilet stools, sinks, urinals and drains must be located such that the lowest point of possible water entry is at least two (2) feet above the elevation of the 100-year flood.

THIS ORDINANCE is adopted by action of the BOARD OF COUNTY COMMISSIONERS, Gallatin County, Montana this 31<sup>st</sup> day of July, 1984 and amended May 1987, April 9, 1991, May 3, 1994, July 12, 1994 and December 7, 1999.

\_\_\_\_\_/s/\_\_\_\_\_  
JANE JELINSKI, CHAIRPERSON

\_\_\_\_\_/s/\_\_\_\_\_  
A. D. PRUITT, MEMBER

\_\_\_\_\_/s/\_\_\_\_\_  
KRIS DUNN, MEMBER

ATTEST:

\_\_\_\_\_/s/\_\_\_\_\_  
SHELLEY CHENEY, CLERK AND RECORDER

*(Amended County Resolution 1999-78 on December 7, 1999.)*

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